

A1
Boney
Cody
in the embodiment shown given the operable frequency ranges. It is noted that pure digital systems employing block conversion techniques are contemplated for lower frequency applications and/or for future high frequency applications using improved digital processing techniques.

REMARKS

The foregoing amended paragraph is provided in a clean format in accordance with 37 C.F.R. § 1.121(b). A marked-up version showing all changes relative to the previous version of this paragraph is provided in Appendix A. No new matter is added by this amendment.

Applicant respectfully requests that this Preliminary Amendment be entered in the above-captioned application prior to examination.

Respectfully submitted,

Brobeck, Phleger & Harrison, LLP

Dated: July 23, 2002

Brobeck, Phleger & Harrison, LLP
Intellectual Property Department
1333 H Street, NW, Suite 800
Washington, DC 20005
(202) 220-6000 (telephone)
(202) 220-5200 (facsimile)

By:



Trevor Coddington, Patent Agent
Registration No. 46,633

APPENDIX A

In more specific embodiments, each of the modulators 401 assert digital output signals to the respective combiners 501A and 501B. Each combiner 501 combines the digital modulated signals into a combined digital signal and includes an internal digital to analog converter (DAC), (not shown), which converts the combined digital signal into a corresponding analog signal. For example, each modulator 401 may be a Quadrature digital up-converter employing QAM modulation techniques, such as the Analog Devices 9856 or 9857 chips manufactured by Analog Devices, Inc., or similar chips such as those [*(may need exemplary part numbers for each of these)*] manufactured by Intersil Corporation, Broadcom Corporation, etc. As described previously, however, alternative modulation techniques, such as FSK or QPSK, for example, or even un-modulated channels are contemplated. Each combiner 501 may be any appropriate type of combiner such as those provided by Mini-Circuits Laboratories or M/A-COM, Inc. [*(may need exemplary part numbers for each of these)*]. In this manner, the CMC1-4 and CMC5-8 signals are analog signals provided to the corresponding mixers 503A, 503B, respectively. The remaining components including the combiner 513 operate with analog signals in the embodiment shown given the operable frequency ranges. It is noted that pure digital systems employing block conversion techniques are contemplated for lower frequency applications and/or for future high frequency applications using improved digital processing techniques.